

In the Claims:

The following claims listing highlights the present amendments to each of pending claims 1-10, herein, and supercedes all prior claims listings in this case.

1. (currently amended) A method of segmenting a selected region from a multi-dimensional dataset, which method comprises the steps of:

- setting-up a shape model representing the general outline of the selected region;
- setting-up an adaptive mesh representing an approximate contour of the selected region,
- which adaptive mesh is
 - initialized and deformed based on the ~~basis of the~~ shape model, and
 - ~~deformed in dependence~~ on the shape model and on feature information of the selected region.

2. (currently amended) A method of segmenting a selected region as claimed in Claim 1, wherein the step of setting-up the shape model includes updating the shape model ~~is updated upon~~ deformation of the adaptive mesh.

3. (currently amended) A method of segmenting a selected region as claimed in Claim 1, wherein the step of setting-up an adaptive mesh includes that

- one or more local surface patches of the selected region are detected, and
- the mesh is deformed in dependence on the local orientation of the mesh relative to the local surface patch(es).

4. (currently amended) A method of segmenting a selected region as claimed in Claim 3, wherein the step of setting-up an adaptive mesh includes that

—the adaptive mesh includes ~~including~~ vertices and links connecting individual vertices, and wherein

—the mesh is deformed in such a manner that individual vertices are moved towards respective surface patches.

5. (currently amended) A method of segmenting a selected region as claimed in Claim 4, wherein individual vertices are moved in dependence on the angle between athe local normal to the mesh and athe normal to athe surface patch.

6. (currently amended) A method of segmenting a selected region as claimed in Claim 5, wherein individual vertices are moved in athe direction normal to athe surface patch.

7. (currently amended) A method of segmenting a selected region as claimed in Claim 1, wherein the mesh adaptation is performed to optimize ~~on the basis of optimizing~~ a value of an energy function, wherein

—the energy function includes ~~having~~ an internal energy contribution that depends on the shape model, and

—an external energy contribution that depends on feature information of the selected region and the actual configuration of the adaptive mesh.

8. (currently amended) A method of segmenting a selected region as claimed in Claim 7, wherein the energy function includes a weighted combination of the internal energy contribution and the external energy contribution, said contributions involving adjustable weight factors.

9. (currently amended) A data processor arranged to
—set-up a shape model representing athe general outline of athe
selected region, and to
—set-up an adaptive mesh representing an approximate contour of
the selected region, wherein the
~~—which adaptive mesh is~~
~~—initialized and deformed on the basis of the shape model and~~
~~—deformed in dependence on the shape model and on feature~~
information of the selected region.

10. (currently amended) A computer program embodied in a computer-
readable medium for implementing a set of computer including
instructions to
—set-up a shape model representing athe general outline of athe
selected region, and to
—set-up an adaptive mesh representing an approximate contour of
the selected region, wherein the
~~—which adaptive mesh is~~
~~—initialized and deformed on the basis of the shape model,~~
and
~~—deformed in dependence on the shape model and on feature~~
information of the selected region.